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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,668	08/19/2003	Brent K. McCurdy	3014.05	3511

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Stephen R. Greiner, Esquire
GREINER LAW OFFICES, P.C
Suite 110
6701 Democracy Blvd
Bethesda, MD 20817

EXAMINER	
DRODGE, JOSEPH W	

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/642,668	MCCURDY, BRENT K.	
	Examiner	Art Unit	
	Joseph W. Drodge	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sivakumar et al patent 5,413,719 in view of one of Zaander et al patent 3,605,775 and Martin patent 4,855,061, all newly cited.

For claim 1, Sivakumar discloses a method for dissolving a measured quantity of a coagulant or flocculant water treatment material that may be a solute (column 5, lines 55-61) in a solvent (water)comprising the steps of: combinng a tracer with a solute in known proportions to form a mixture (column 2, lines 58-60), the tracer being capable of increasing the turbidity of a solvent (water) in proportion to the concentration of the solute dissolved in the solvent (Figure 32 and Example 9, column 17); providing a container for receiving the mixture and a solvent (see column 17, lines 25-27 "on a Phipps and Bird gang stirrer"; introducing the solvent and the mixture into the container; and, suggests stirring the solvent until the turbidity and tracer concentration thereof

reaches, or rises to a predetermined level as determined by monitoring (Examples 8 and 9, along with claim 5 that states that the monitoring is conducted continuously).

Column 5, lines 36-43 and 53-55 teach that relatively large quanties of tracers may be added, and these may be present in larger quantity than the amount of tracer, while column 13, lines 22-25 and 33-38 also correlate increases in tracer concentration with increases in turbidity. Thus, the increased turbidity necessarily result in part from the addition of tracers when the amounts of tracer added are substantial or large. ***It is also now submitted, in further support, that the types of tracers employed by Sivakumar (column 5, lines 16-26) may include various alkali metal salts, which at least overlap the same alkali metal salts listed in the Instant Specification at page 8, lines 12-21, thus the alkali metal salt tracers of Sivakumar also inherently have turbitity raising properties.***

The claims differ in explicitly requiring that the stirring be continued until the turbidity, as measured by a turbidimeter reaches such predetermined level. However, both Zaander et al (Figures 1 and 2 and Abstract) and Martin patent 4,855,061 (Figure 1 and Abstract) each teach continuous operation of a stirrer to mix coagulant or flocculant water treatment material to water, by measuring turbidity downstream of the mixer. Thus, it would have been obvious to one of ordinary skill at the time of the invention to have operated the monitoring of turbidity and tracer concentration disclosed by Sivakumar, while stirring is continuously conducted [until and beyond periods when

measured turbidity rises above desired set points], as taught by Zaander or Martin, so as to maintain stable, optimum levels of treatment chemicals in the water being treated.

For claim 2, Sivakumar suggests that the tracer and the solute are finely divided solids both being capable of dissolving in the solvent (column 1, line 65-66 and column 8, lines 33-50).

For claim 5, in Sivakumar, the solvent is selected from the recited group in that water as a solvent is employed (column 1,line 65).

For claim 6, in Sivakumar amount of the mixture introduced to the container is or may be sufficient to saturate the solvent (see figures 29 and 30 showing dramatic increase in observed color change to the water above predetermined dosage of solute); also see column 5, lines 36-43 and 55-58 concerning tracers amounts of up to 500,000 ppm.

For claims 7 and 9, both Zaander (column 8, lines 16-18 and 42-50) and Martin (column 5, lines 14-20) teach use of a turbidimeter that includes: directing a beam of light through the solvent to a photodetector; and, converting the light received by the photodetector into a turbidity level.

For claim 8, Sivakumar discloses a method for dissolving a measured quantity of a coagulant or flocculant water treatment material that may be a solute (column 5, lines 55-61) in a solvent (water)comprising the steps of: combinng a tracer with a solute in known proportions to form a mixture (column 2, lines 58-60), the tracer being capable of increasing the turbidity of a solvent (water) in proportion to the concentration of the

solute dissolved in the solvent (Figure 32 and Example 9, column 17); providing a container, equipped with a turbimeter, for receiving the mixture and a solvent (see column 17, lines 25-27 "on a Phipps and Bird gang stirrer"; introducing the solvent and the mixture into the container; and, suggests stirring the solvent until the turbidity, as measured by the turbidimeter, and tracer concentration thereof reaches, or rises to a predetermined level as determined by monitoring (Examples 8 and 9, along with claim 5 that states that the monitoring is conducted continuously).

Column 5, lines 36-43 and 53-55 teach that relatively large quanties of tracers may be added, and these may be present in larger quantity than the amount of tracer, while column 13, lines 22-25 and 33-38 also correlate increases in tracer concentration with increases in turbidity. Thus, the increased turbidity necessarily result in part from the addition of tracers when the amounts of tracer added are substantial or large. ***It is also now submitted, in further support, that the types of tracers employed by Sivakumar (column 5, lines 16-26) may include various alkali metal salts, which at least overlap the same alkali metal salts listed in the Instant Specification at page 8, lines 12-21, thus the alkali metal salt tracers of Sivakumar also inherently have turbitity raising properties.***

The claims differ in explicitly requiring that the stirring be continued until the turbidity, as measured by a turbidimeter reaches such predetermined level. However, both Zaander et al (Figures 1 and 2 and Abstract) and Martin patent 4,855,061 (Figure 1 and Abstract) each teach continuous operation of a stirrer to mix coagulant or flocculant

water treatment material to water, by measuring turbidity downstream of the mixer. Thus, it would have been obvious to one of ordinary skill at the time of the invention to have operated the monitoring of turbidity and tracer concentration disclosed by Sivakumar, while stirring is continuously conducted [until and beyond periods when measured turbidity rises above desired set points], as taught by Zaander or Martin, so as to maintain stable, optimum levels of treatment chemicals in the water being treated.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sivakumar et al in view of Zaander et al or Martin as applied to claim 1 above, and further in view of Zeiher et al patent 6,821,428, of record.

Claim 3 further differs in requiring that the tracer is selected from the group consisting of insoluble metaphosphate. zeolite, sodium sulfate, calcium silicate, calcium phosphate, dibasic calcium phosphate, tribasic phosphate, magnesium carbonate, and calcium carbonate. Zeiher teaches fluorescent tracers added to water treatment formulations in known proportions for process control purposes included in this group, for example salts of calcium, sulfate, metaphosphate or biphosphate (column 13, line 65-column 14, line 6). It would have been further obvious to have selected a tracer from the group taught by Zeiher, since their detection can readily be quantified with known optical sensors and monitors.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sivakumar et al in view of Zaander et al or Martin and in view of Dixon et al patent 5,308,499 (also newly cited).

For claim 10, Sivakumar discloses a method for dissolving a measured quantity of a coagulant or flocculant water treatment material that may be a solute (column 5, lines 55-61) in a solvent (water)comprising the steps of: combinng a tracer with a solute in known proportions to form a mixture (column 2, lines 58-60), the tracer being capable of increasing the turbidity of a solvent (water) in proportion to the concentration of the solute dissolved in the solvent (Figure 32 and Example 9, column 17); providing a container, equipped with a turbidimeter, for receiving the mixture and a solvent (see column 17, lines 25-27 "on a Phipps and Bird gang stirrer"; introducing the solvent and the mixture into the container; and, suggests stirring the solvent until the turbidity and tracer concentration thereof reaches, or rises to a predetermined level as determined by monitoring (Examples 8 and 9, along with claim 5 that states that the monitoring is conducted continuously).

Column 5, lines 36-43 and 53-55 teach that relatively large quanties of tracers may be added, and these may be present in larger quantity than the amount of tracer, while column 13, lines 22-25 and 33-38 also correlate increases in tracer concentration with increases in turbidity. Thus, the increased turbidity necessarily result in part from the addition of tracers when the amounts of tracer added are substantial or large. ***It is also now submitted, in further support, that the types of tracers employed by Sivakumar (column 5, lines 16-26) may include various alkali metal salts, which at***

least overlap the same alkali metal salts listed in the Instant Specification at page 8, lines 12-21, thus the alkali metal salt tracers of Sivakumar also inherently have turbitity raising properties.

The coagulants or flocculant employed in Sivakumar may be alkali metal salts, i.e. "alkali builders" (see column 5, lines 23-26

The claims differ in explicitly requiring that the stirring be continued until the turbidity, as measured by a turbidimeter reaches such predetermined level. However, both Zaander et al (Figures 1 and 2 and Abstract) and Martin patent 4,855,061 (Figure 1 and Abstract) each teach continuous operation of a stirrer to mix coagulant or flocculant water treatment material to water, by measuring turbidity downstream of the mixer. Thus, it would have been obvious to one of ordinary skill at the time of the invention to have operated the monitoring of turbidity and tracer concentration disclosed by Sivakumar, while stirring is continuously conducted [until and beyond periods when measured turbidity rises above desired set points], as taught by Zaander or Martin, so as to maintain stable, optimum levels of treatment chemicals in the water being treated.

Claims 10 and 11 also differ in requiring the mixed water and turbid mixture of treatment chemical and tracer to be mixed with a surfactant after completion of the stirring/mixing step. Dixon suggests such order of treatment steps (Abstract, claim 1 and column 2, lines 21-54). It would have been further obvious to have added the surfactant addition step of Dixon to the Sivakumar process, in order to more thoroughly separate material from the water being treated as flocs.

For claim 11, both Zaander (column 8, lines 16-18 and 42-50) and Martin (column 5, lines 14-20) teach use of a turbidimeter that includes: directing a beam of light through the solvent to a photodetector; and, converting the light received by the photodetector into a turbidity level.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sivakumar et al in view of Zaander et al or Martin and in view of Dixon et al as applied to claim 10 above, and further in view of Zeiher et al patent 6,821,428, of record.

Claim 12 further differs in requiring that the tracer is selected from the group consisting of insoluble metaphosphate. zeolite, sodium sulfate, calcium silicate, calcium phosphate, dibasic calcium phosphate, tribasic phosphate, magnesium carbonate, and calcium carbonate. Zeiher teaches, fluorescent tracers added to water treatment formulations in known proportions for process control purposes included in this group, for example salts of calcium, sulfate, metaphosphate or biphosphate (column 13, line 65-column 14, line 6). It would have been further obvious to have selected a tracer from the group taught by Zeiher, since their detection can readily be quantified with known optical sensors and monitors.

ALLOWABLE SUBJECT MATTER

Each of independent claims 1,8 and 10 would be considered to distinguish over all of the prior art, if amended to additionally recite at the end of the respective claims;

"to produce a liquid detergent; and employing the detergent in a car wash". The arguments accompanying the 1/26/2005 Amendment were persuasive concerning applied prior art directed to use of detergents employed in car washes, and none of the newly cited prior art suggests producing of a liquid detergent that is employed for use with car washes.

Applicant's arguments filed 8/1/2006 have been fully considered but they are not persuasive. It is argued, especially with regard to claim 1, that in Sivakumar et al turbidity is a function of the presence and amount of polymer present and not a function of presence and amount of tracer. However, it is submitted that in Sivakumar at least figures 30 and 32 make clear that turbidity is a function of the total amount of tracer and treatment polymer together in the liquid being treated. Column 5, lines 36-43 and 53-55 teach that relatively large quanties of tracers may be added, and these may be present in larger quantity than the amount of tracer, while column 13, lines 22-25 and 33-38 also correlate increases in tracer concentration with increases in turbidity. Thus, the increased turbidity necessarily result in part from the addition of tracers when the amounts of tracer added are substantial or large. ***It is also now submitted, in further support, that the types of tracers employed by Sivakumar (column 5, lines 16-26) may include various alkali metal salts, which at least overlap the same alkali metal salts listed in the Instant Specification at page 8, lines 12-21, thus the alkali metal salt tracers of Sivakumar also inherently have turbitity raising properties.***

It is also argued that Sivakumar teaches that stirring not be continuous and provides for settling periods. It is submitted that the instant claims do not require that stirring be continuous

It is argued that Sivakumar teaches a method resulting in a continuous suspension of coagulated or flocculated wastes. However, it is submitted that the claims do not preclude suspension or coagulation of solids or particles.

With respect to claim 2, it is submitted that Sivakumar discloses at column 1, lines 65-66 suspended or dissolved particles, hence forms of solids that are finely divided.

In reply to argument that Sivakumar does not disclose amounts of mixture of polymer and tracer sufficient to saturate a solvent, see column 5, lines 36-43 and 55-58 concerning tracers amounts of up to 500,000 ppm.

With regard to claims 7 and 8 argument, no ***"legal basis support" is necessary, it is well known that turbidimeters accurately gauge turbidity levels.***

For arguments pertaining to claims 3 and 10-12, see the responses to the claim 1 argument.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

September 15, 2006

JOSEPH DRODGE
PRIMARY EXAMINER